

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Compressor Station 40/500C1  
Tennessee Gas Pipeline Company  
Natchitoches, Natchitoches Parish, Louisiana  
Agency Interest Number 3144  
Activity Number PER20080001  
Draft Permit 1980-00011-V4**

**I APPLICANT**

**Company**

Tennessee Gas Pipeline Company  
569 Brookwood Village  
Birmingham, Alabama 35209

**Facility**

Compressor Station 40/500C1  
195 Highway 504, Natchitoches, Natchitoches Parish, Louisiana  
Approximate UTM coordinates are 486 346 kilometers East and 3515 538 kilometers  
North, Zone 15

**II FACILITY AND CURRENT PERMIT STATUS**

Tennessee Gas Pipeline Company Compressor Station No 40/500C1, is an existing natural gas compression facility Compressor Station No 40/500C1 previously operated under Permit No 1980-00011-V2, issued January 18, 2006 Currently the facility operates under Permit No 1980-00011-V3 dated March 21, 2006

This permit serves as a renewal/modification for the Compressor Station 40/500C1

**III PROPOSED PERMIT / PROJECT INFORMATION**

**Proposed Permit**

A permit application was submitted by Tennessee Gas Pipeline Company on July 18, 2008, requesting a Part 70 operating permit renewal/modification

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge and in *The Natchitoches Times* A copy of the notice was mailed to concerned

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citizens listed in the Office of Environmental Services Public Notice Mailing List. The application and proposed permit were submitted to the East Baton Rouge Parish Library and the Natchitoches Parish Library. The proposed permit was also submitted to US EPA Region 6. All comments will be considered prior to the final permit decision.

### **Project description**

Tennessee Gas Pipeline Company transports natural gas from production fields located in Texas and Louisiana to markets in the New England states. At Compressor Station 40/500C1, natural gas is routed to compressors driven by a turbine and engines, then reintroduced into the pipeline. The station is 40 miles east of the Texas-Louisiana state border.

Tennessee Gas Pipeline Company requests to revise the emission rates as a result of emission factor, heat input, and liquid throughput reconciliations. There has been no physical change or change in operations at the facility. The facility has an overall NO<sub>x</sub> cap of 2943.23 tpy to maintain compliance with the National Ambient Air Quality Standards.

### **Permitted Air Emissions**

Estimated emissions from the facility in tons per year are as follows:

Pollutant	Before	After	Change
PM <sub>10</sub>	33.68	38.75	+5.07
SO <sub>2</sub>	0.77	0.84	+0.07
NO <sub>x</sub>	2943.23	2943.23*	—
CO	569.81	569.81	—
VOC†	141.31	164.54	+23.23

\*Site wide NO<sub>x</sub> emissions limit

#### †VOC LAC 33 III Chapter 51 Toxic Air Pollutants (TAPs)

Benzene	0.27	0.27	—
Formaldehyde	88.29	88.27	-0.02
n-Hexane	0.19	0.19	—
Toluene	0.28	0.28	—
Ethylbenzene	0.04	0.04	—
Ethylene Glycol	0.49	0.49	—
Xylene (mixed isomers)	0.16	0.16	—
Total	89.72	89.70	-0.02

Other VOC (TPY) 74.84

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**Prevention of Significant Deterioration Applicability**

This renewal/modification permit does not propose any physical or operation modifications to the existing operations. Rather, any changes in the emission rates are a result of updated factors, revised calculation methodology, or correction to reflect more accurate data. As such, PSD analysis is not required.

**Non-Attainment New Source Review (NNSR)**

Compressor Station 40/500C1 is located in an attainment area for all criteria pollutants. As such, NNSR analysis is not required.

**MACT requirements**

These regulations define maximum achievable control technology (MACT) standards for stationary source categories of hazardous air pollutants (HAPs). These HAPs are listed in the Clean Air Act Amendments of 1990.

Engines A1A, A2A, A3A, and C1A are less than 500 horsepower. Other engines are existing lean burn engines. Therefore this subpart does not apply.

**Air Modeling Analysis**

Emissions associated with the proposed renewal/modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33 III 501 B 5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

**IV Regulatory Analysis**

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable

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terms conditions and standards are provided in the Facility Specific Requirements Section of the draft permit

**Prevention of Significant Deterioration Applicability**

The proposed projects will result in no physical changes in the Compressor Station 40/500C1 Permit Therefore, PSD permitting requirements are not triggered

**Non-Attainment New Source Review (NNSR) Part 52**

This project includes no physical modifications in Compressor Station 40/500C1 Therefore, NNSR analysis is not triggered

**New Source Performance Standards (NSPS) – Part 60**

**NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**

NSPS Subpart IIII does not apply to natural gas-fired engines

**NSPS Subpart JJJJ – Standards of Performance for Spark Ignition Internal Combustion Engines**

Engines A1A, A2A, A3A and C1A have not been constructed reconstructed or modified after June 12, 2006 Therefore, these engines are exempt from the requirements of this subpart

**National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories – Part 63**

**Subpart ZZZZ Reciprocating Internal Combustion Engines (RICE) NESHAP**

Engines A1A, A2A, A3A, and C1A are less than 500 horsepower Other engines are existing lean burn engines Therefore, NESHAP Subpart ZZZZ does not apply

**Compliance Assurance Monitoring (CAM) – Part 64**

Emission units at the Compressor Station 40/500C1 are not equipped with an add-on control device to achieve compliance with an emission limitation or standard As such, a CAM Plan is not required for the Compressor Station 40/500C1

**40 CFR 68 – Chemical Accident Prevention**

The Compressor Station 40/500C1 site complies with the requirements in 40 CFR 68 As required, risk management plans for the site were originally submitted

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**State Operating Permit Program (Title V) – Part 70**

This permit is a renewal/modification permit and the application, submitted under the Louisiana Title V permitting program, contains all the elements as required under the Louisiana Title V regulations

**State Regulations**

**Comprehensive Toxic Air Pollutant Emission Control Program – Chapter 51**

Formaldehyde emissions are from natural gas fires engines. Therefore, these emissions are exempt from the Louisiana Air Toxic Regulations. The facility is classified as a minor source of toxic air pollutants (TAPs) pursuant to LAC 33 III Chapter 51.

**V Permit Shields**

A permit shield was not requested.

**VI Periodic Monitoring**

No periodic monitoring is required.

**VII Applicability and Exemptions of Selected Subject Items**

See Permit

**VIII Streamlined Requirements**

None

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## IX Glossary

**Best Available Control Technologies (BACT)** - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant

**Carbon Monoxide (CO)** - A colorless, odorless gas which is an oxide of carbon

**Grandfathered Status**- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

**Hydrogen Disulfide (H<sub>2</sub>S)** - A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the action of acids on metallic sulfides, and is an important chemical reagent.

**Maximum Achievable Control Technology (MACT)** - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33 III Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

**New Source Review (NSR)** - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

**Nitrogen Oxides (NO<sub>x</sub>)** - Compounds whose molecules consist of nitrogen and oxygen.

**Nonattainment New Source Review (NNSR)** - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air

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Quality Standards (NAAQS) at 40 CFR Part 50 Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality

Organic Compound - Any compound of carbon and another element Examples Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33 III 507 Major sources include, but are not limited to, sources which have the potential to emit  $\geq 10$  tons per year of any toxic air pollutant,  $\geq 25$  tons of total toxic air pollutants, and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes)

PM<sub>10</sub>- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50 PSD requirements are designed to ensure that the air quality in attainment areas will not degrade

Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulfur

Title V permit – See Part 70 Operating Permit

Volatile Organic Compound (VOC) Any organic compound which participates in atmospheric photochemical reactions, that is, any organic compound other than those which the administrator of the U S Environmental Protection Agency designates as having negligible photochemical reactivity